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10/808,382

03/25/2004

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EXAMINER

NGUYEN, TRANG T

ART UNIT

PAPER NUMBER

4114

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PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/808,382	<b>Applicant(s)</b> FUNAHASHI ET AL.	
	<b>Examiner</b> TRANG NGUYEN	<b>Art Unit</b> 4114	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 25 March 2004.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>10/03/07; 08/29/08; 3/25/04</u> .                             | 6) <input type="checkbox"/> Other: _____                          |

## DETAILED ACTION

### Status of Claims

1. This action is in reply to the application filed on March 25, 2004.
2. Claims 1-12 are currently pending and have been examined.

### Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 1 – 12 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The claims are generally narrative and indefinite, failing to conform to current U.S. practice. They appear to be a literal translation into English from a foreign document and are replete with grammatical and idiomatic errors.

Examiner cannot determine the terms related to "... a name of a site ..." of the patient. Specifically, the terms: "... obtains a name of a site newly ..." (claim 2), "... extracts one way of said image processing ..." and "... a number of used times is the largest ..." (claim 10), are vague and indefinite. With respect to all claims, the claim language is vague and indefinite because the verb tense is wrong, grammatical structure is wrong, and that the claims generally fail to conform to the standards for writing in the English language.

5. Claims 10 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

**Claims 10** recites the limitation "... for which a number of used times is the largest, from a plurality of ways ..." Examiner cannot determine the metes and bounds of this claim. For the purpose of this examination, the Examiner will assume the claim involves keeping track of the

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number of time the modality has been used.

6. Claims 4-10 and 12 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

**Claim 4-10 and 12** say "disease/injury" but it is not clear if it is disease OR injury, disease AND injury, disease AND/OR injury. Examiner cannot determine the metes and bounds of this claim. For the purpose of this examination, the Examiner will assume the "slash" (/) means OR

7. Claims 1-12 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

**Claims 1-12** recites in the preamble that the claim is directed towards the statutory category of a system. However, the body of the claim 18 comprises a series of "unit", and thus is directed towards functional descriptive materials. Therefore, it is not clear how "unit" (or functional descriptive material) constitutes a system. Clarification is required. For examination purposes, Examiner has construed the system to contain a combination of software and hardware elements.

#### ***Claim Rejections - 35 USC § 101***

8. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

9. Claims 1-12 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

**Claims 1-12** are directed to a system (apparatus). However, the "system" is not defined by hardware but by "units", and thus limitations can be reasonably interpreted as computer program modules or software per se. The claims are directed to functional descriptive material per se and hence non-statutory.

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The claims constitute computer programs representing computer listings per se. Such descriptions or expressions of the programs are not physical “things”. They are neither computer components nor statutory processes, as they are not “acts” being performed. Such claimed computer programs do not define any structural and functional interrelationships between the computer program and other claimed elements of a computer, which permit the computer program’s functionality to be realized. In contrast, a claimed computer-readable medium encoded with a computer program is a computer element, which defines structural and functional interrelationships between the computer program and the rest of the computer, that permits the computer program’s functionality to be realized, and is thus statutory. See Lowry, 32 F.3d at 1583-84, 32 USPQ2d at 1035.

***Claim Rejections - 35 USC § 102***

10. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

11. Claims 1-5 are rejected under 35 U.S.C. 102(b) as being anticipated by Rothschild et al (US 6,678,703 B2).

**Examiner’s Note:** The Examiner has pointed out particular references contained in the prior art of record within the body of this action for the convenience of the Applicant. Although the specified citations are representative of the teachings in the art and are applied to the specific limitations within the individual claim, other passages and figures may apply. Applicant, in preparing the response, should consider fully the entire reference as potentially teaching all or part of the claimed invention, as well as the context of the passage as taught by the prior art or disclosed by the Examiner.

**Claim 1:**

Rothschild, as shown, discloses the following limitations:

*An image processing apparatus comprising:*

- *an image-processing history storing unit operable to store details of image processing performed for a medical image of a patient to correspond to a name of said patient (See at least Figures 6 and 9; Column 11, Lines 56-67; Column 29, Lines 5-11; Column 32, Lines 1-11);*
- *an image acquisition unit operable to newly obtain a name of a patient and a medical image in such a manner that they correspond to each other (See at least Figures 1 and 9);*
- *an image-processing details extraction unit operable to extract said details of said image processing stored in said image-processing history storing unit to correspond to said name of said patient newly obtained by said image acquisition unit other (See at least Figures 1 and 9);*
- *an image processing unit operable to perform image processing having details that are the same as said details of said image processing thus extracted, for said medical image newly obtained by said image acquisition unit patient (See at least Column 12, Lines 41-49; Column 14, Lines 12-26; Column 15, Lines 32-39).*

**Claim 2:**

Rothschild discloses the limitations as shown in the rejections above. Furthermore, Rothschild discloses *an image processing apparatus as claimed in claim 1, wherein*

- *said image-processing history storing unit stores said medical image of said patient in such a manner that said medical image correspond to said name of said patient and a name of a site of said patient (See at least Figures 6 and 9; Column 28, Lines 36-41; Column 32, Lines 1-11; Column 18, Lines 42-45);*
- *said image acquisition unit further obtains a name of a site newly (See at least Column 11, Lines 29-32; Column 12, Lines 52-57; Column 13, Lines 21-26);*

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- *said image-processing details extraction unit extracts said details of said image processing stored in said image-processing history storing unit to correspond to said name of said patient and said name of said site that were newly obtained by said image acquisition unit (See at least Figures 1 and 9).*

**Claim 3:**

Rothschild discloses the limitations as shown in the rejections above. Furthermore, Rothschild discloses *an image processing apparatus as claimed in claim 1, wherein said image-processing history storing unit stores said details of said image processing that was performed for said medical image when diagnosis based on said medical image was input in an electronic medical chart (See at least Figure 9; Column 18, Lines 28-48).*

**Claim 4:**

Rothschild discloses the limitations as shown in the rejections above. Furthermore, Rothschild discloses *an image processing apparatus as claimed in claim 1, wherein said image-processing history storing unit stores details of an operation related to a frequency that was performed for said medical image in order to diagnose a disease/injury of said patient, as said details of said image processing (See at least Column 21, Lines 56-62; Column 29, Lines 5-11).*

**Claim 5:**

Rothschild discloses the limitations as shown in the rejections above. Furthermore, Rothschild discloses *an image processing apparatus as claimed in claim 1, wherein said image-processing history storing unit stores a range of an intensity of brightness of said medical image that was selected for diagnosis of a disease/injury of said patient, as said details of said image processing (See at least Column 19, Lines 48-58; Column 29, Lines 5-11).*

***Claim Rejections - 35 USC § 103***

12. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

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invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

13. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

14. Claims 6, 7, 11 - 12 are rejected under 35 U.S.C. 103 (a) as being unpatentable over Rothschild et al (US 6,678,703 B2) in view of Ito et al (US 5,172,418 B2).

**Claim 6:**

Rothschild, as shown, discloses the following limitations:

*An image processing apparatus comprising:*

- *an image processing unit operable to perform image processing having details that are the same as extracted said details of said image processing, for said medical image newly obtained by said image acquisition unit (See at least Column 12, Lines 41-49; Column 14, Lines 12-26; Column 15, Lines 32-39);*

Rothschild does not disclose the following limitation. However, Ito as shown discloses:

- *an image-processing history storing unit operable to store details of image processing performed for a medical image of a patient in such a manner that said details of said image processing correspond to a name of a disease/injury of said patient that was diagnosed (See at least Column 2, Lines 55-65; Column 6, Lines 13-24; Column 6, Lines 47-66);*
- *an image acquisition unit operable to newly obtain a name of a disease/injury and a medical image (See at least Column 2, Lines 55-65; Column 6, Lines 13-24; Column 6, Lines 47-66);*
- *an image-processing details extraction unit operable to extract said details of said image*



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*processing stored in said image-processing history storing unit in such a manner that said details of said image processing correspond to said name of said disease/injury newly obtained by said image acquisition unit (See at least Figures 1 and 9 – Rothschild and Column 2, Lines 55-65; Column 6, Lines 13-24; Column 6, Lines 47-66 - Ito).*

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the technique of performing image processing as taught by Rothschild to also store details of image processing performed for a medical image of a patient to correspond to the patient's name and the name of a disease/injury as taught by Ito because the healthcare provider can save the effort of processing the image thus enable the healthcare provider to accurately and effectively identify the malady and appropriate remedy for the particular patient.

**Claim 7:**

The combination of Rothschild/Ito discloses the limitations as shown in the rejections above.

Furthermore, Rothschild discloses:

*An image processing apparatus as claimed in claim 6, wherein*

- *said image acquisition unit further obtains a name of a site to correspond to said medical image newly obtained (See at least Figures 6 and 9; Column 28, Lines 36-41; Column 32, Lines 1-11; Column 18, Lines 42-45);*

Rothschild/Ito does not disclose the following limitation. However, Ito as shown discloses:

- *said image-processing history storing unit stores said details of said image processing in such a manner that said details of said image processing correspond to said name of said disease/injury (See at least Column 2, Lines 55-65; Column 6, Lines 13-24; Column 6, Lines 47-66 - Ito), as well as a name of a site (See at least Figures 1 and 9 – Rothschild);*
- *said image-processing details extraction unit extracts said details of said image processing stored in said image-processing history storing unit, to correspond to said name of said disease/injury and said name of said site that were newly obtained by said image acquisition unit (See at least Figures 1 and 9 – Rothschild; and Column 2, Lines*

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55-65; Column 6, Lines 13-24; Column 6, Lines 47-66 - Ito).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the technique of storing details of image processing performed for a medical image of a patient to correspond to a name of a site as taught by Rothschild to also store the name of a disease/injury with the image processing history as taught by Ito because aids the physician to more accurately identify the malady and appropriate remedy for a patient.

**Claim 11:**

The combination of Rothschild/Ito discloses the limitations as shown in the rejections above. Furthermore, Rothschild discloses:

*An image processing apparatus as claimed in claim 6, wherein said image-processing history storing unit stores said details of said image processing when diagnosis based on said medical image was input in an electronic medical chart (See at least Figure 9; Column 18, Lines 28-48).*

**Claim 12:**

The combination of Rothschild/Ito discloses the limitations as shown in the rejections above. Furthermore, Rothschild (in at least Column 1, Lines 8-12; and Column 23, Lines 12-18) discloses:

*An image processing apparatus as claimed in claim 6, wherein, when an electronic medical chart was selected, said image acquisition unit obtains said medical image and said name of said disease/injury that are attached to said selected electronic medical chart, said image-processing details extraction unit extracts said details of said image processing that are stored to correspond to said name of said disease/injury newly obtained by said image acquisition unit from said electronic medical chart, from said image-processing history storing unit, said image processing unit performs image processing having details that are the same as those extracted, for said medical image newly obtained by said image acquisition unit from said electronic medical chart.*

15. Claims 8-10 are rejected under 35 U.S.C. 103 (a) as being unpatentable over Rothschild et al (US 6,678,703 B2) in views of Ito et al (US 5,172,418 B2) and further in view of **Official Notice**.

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**Claim 8:**

*An image processing apparatus as claimed in claim 6, wherein said image-processing history storing unit stores said details of said image processing in such a manner that said details of said image processing correspond to said name of said disease/injury as well as a type of said patient, said image acquisition unit further obtains a type of a patient to correspond to said medical image newly obtained,*

*said image-processing details extraction unit extracts said details of said image processing stored in said image-processing history storing unit, to correspond to said name of said disease/injury and said type of said patient that were newly obtained by said image acquisition unit.*

**Claim 9:**

*An image processing apparatus as claimed in claim 6, wherein said image-processing history storing unit stores said details of said image processing in such a manner that said details of said image processing correspond to said name of said disease/injury as well as a name of a doctor who performed said image processing, said image acquisition unit further obtains a name of a doctor to correspond to said medical image newly obtained, said image-processing details extraction unit extracts said details of said image processing stored in said image-processing history storing unit, to correspond to said name of said disease/injury and said name of said doctor that were newly obtained by said image acquisition unit.*

Regarding claims 8 and 9 above, they are essentially the same as claim 7 and are rejected based on the same rationale discussed in claim 7 rejections. The minor difference is that claim 8 includes a type of patient and claim 9 includes a name of a doctor who performed the image processing instead of a name of a site as recites in claim 7.

The examiner also takes **Official Notice** that it is old and well-known in the art to store medical records with patient information. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the technique of storing details of image processing performed for a medical image of a patient to correspond to the patient's name as taught by Rothschild/Ito to also store the name of a doctor or type of patient with the image processing history because this

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aids the physician to more accurately identify the malady and appropriate remedy for the particular patient.

**Claim 10:**

Rothschild/Ito discloses the limitations as shown in the rejections above. Rothschild/Ito does not specifically disclose:

*An image processing apparatus as claimed in claim 6, wherein said image-processing details extraction unit extracts one way of said image processing for which a number of used times is the largest, from a plurality of ways of said image processing stored in said image-processing history storing unit to correspond to said name of said disease/injury newly obtained by said image acquisition unit.*

However, the examiner takes **Official Notice** that it is old and well-known in the art to keep track the number of times something has been used. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the method of extracting and storing image processing history as disclosed by Rothschild/Ito to include the number of time the modality has been used because this information is useful in medical study and diagnosis.

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Any inquiry of a general nature or relating to the status of this application or concerning this communication or earlier communications from the Examiner should be directed to **TRANG NGUYEN** whose telephone number is **571-270-5483**. The Examiner can normally be reached on Monday-Friday, 9:30am-5:00pm. If attempts to reach the examiner by telephone are unsuccessful, the Examiner's supervisor, **JAMES A. REAGAN** can be reached at **571.272.6710**. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://portal.uspto.gov/external/portal/pair>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at **866.217.9197** (toll-free).

Any response to this action should be mailed to:

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/TRANG NGUYEN/

February 19, 2009

Examiner, Art Unit 4114

/James A. Reagan/

Supervisory Patent Examiner, Art Unit 4114